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#### **ABSTRACT**

The impact that color-copying technology and digital imaging have had on art, photography, and design are explored. Color copiers have provided new opportunities for direct and spontaneous image making an the potential for new transformations in art. The current generation of digital color copiers permits new directions in imaging, but the manipulations possible with digital images create ethical quandaries that are not yet fully realized. Digital imagery also diminishes the distinction between originals and multiples. Appropriation of an original is quick and effortless, and can be seen as either a concern or an opportunity. The wizardry of digital color copiers and related computer technologies is reminiscent of the magical quality attributed to photography in its early years. The potential for new constructs offered by digital imaging can be seen as both opportunity and concern. (Contains 5 references.) (SLD)

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# The Artist, the Color Copier, and Digital Imaging

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## The Artist, the Color Copier, and Digital Imaging

### Mary Stieglitz Witte

**BACKGROUND** 

In 1938 Chester Carlson produced the first electrophotograph. His 1939 patent, described the 'electrophotographic copying apparatus' which would evolve into the first commercially successful photocopier. The Haloid Corporation developed Carlson's process, and as Haloid Xerox. released the Xerox Model D in 1950, and the celebrated Xerox 914 in 1959. Artists experimented with photocopiers as soon as copy machines appeared in worksites. Artists were intrigued when full color copiers appeared on the market. The 3-M Color-in-Color System I was introduced in 1968. By 1970, Sonia Landy Sheridan established a program in 'Generative Systems' at the Art Institute of Chicago which incorporated this new color copier Sheridan described the program as one "which brought artists and scientists together, ... an effort at turning the artist's passive role into an active one by promoting the investigation of contemporary scientific-technological systems and their relationship to art and life."1

As the seventies proceeded, artists were working with the 3-M Color-in-Color System I and II, and with the Color Xerox 6500. Xerox and 3-M both employed three-color systems and lightlens technology, which offered potentials as well as limits. The Xerox 6500 dominated the color copier market during the seventies and eighties. These first color copiers offered opportunity for creative imaging, considerable manipulation of colors & images, and the transfer of images to a variety of other

surfaces. Color copiers became a new tool for artists, photographers and designers. They provided opportunity for direct, spontaneous image making with potential for new transformations.

'Electroworks', a major copy-art exhibition was installed by the International Museum of Photography at George Eastman House, Rochester, New York, in 1979. The exhibit included a varied collection of two hundred and fortyfive works ranging from experimental photomontages to limited edition books and clothing. In the catalogue, guest curator Marilyn McCray referred to copy art as having "generated activity all over the world. These highly stylized and individualized works of art are collected by major museums and sold by art dealers and galleries for prices that amaze the inventors of the processes and the pioneers photo-copier marketing."2 The exhibition clearly demonstrated the potential of color copiers as tools for the visual arts.

In 1982, the Centre Copie-Art was established in Montréal (Québec), Canada. The Centre's replete blend of exhibitions, workshops, research, and catalogues, promoted the meeting of art and technology. Jacques Charbonneau, founder and managing director, described the Centre's research consequences: "Many artists arrived to a new perception of a great creative power which was unsuspected prior to the works made thanks to the Centre." The Centre's main goal is to integrate copy-art into the field of visual arts. The Centre Copie-Art closely





cooperates with the <u>Museum für Fotokopie</u> in Mülheim, Germany and the <u>Museo Internacional de Electrografia</u> in Cuenca, Spain, as well as other copy-art centers worldwide.

Philippe Boissonnet described the Centre's ongoing 'Artist in Residence Program' as dealing with the expressive and plastic potentialities of the equipment, the unexperimented and free exploration. He cites intent to "create works which would be one-of-a-kind, which would be original as contrasted to a copy. The idea: try to outspace the limits which are intrinsic to the "copigraphic tool". The idea: to feature some of the plastic characteristics inherent to the medium."

In 1982, Louise Odes Neaderland founded the International Society of Copier Artists in New York City. Neaderland reports that the impetus for founding ISCA was the lack of opportunity to share and show copier art. The Society promotes and recognizes the use of the copier as a fine art tool. Neaderland continues to direct ISCA and publish the ISCA Quarterly, of which one issue a year is dedicated to bookworks. This annual 'box of books' is a favorite of both artists and collectors.

Artist members include printmakers, painters, photographers, graphic designers, book artists and computer graphists. More than twenty-five museum and institutional members worldwide subscribe to the *Quarterly*, a limited edition journal composed entirely of original art. ISCA also mounts traveling 'Iscagraphics' exhibitions, and maintains an extensive slide archive in New York.

#### **NEW DIRECTIONS**

In 1988 the Canon Corporation began marketing its Color Laser Copier, the CLC 1. This full color digital laser copier revolutionized the color copier market with digital scanning, a four color system, high resolution, and a wide range of manipulative capabilities. The Canon

CLC was the first of many full color copiers to be introduced into this rejuvenated market in the late eighties and early nineties. Kodak, Konica, Minolta, Mita, Panasonic, Xerox, Richoh and Savin also market color copiers. The related proliferation of full color digital printers, plotters, bubble jets, ink jets, thermal transfer and similar devices also increased the hard copy alternatives available to visual artists.

The current generation of digital color copiers allows increased opportunity for new directions in imaging. The switch from light-lens to digital laser scanning vastly expanded copier capabilities. Digital technology offers greater user control, versatility in creative editing, and resolution. Laser scanners 'read' the image, capture the image digit-by-digit, and process the information by computer. As input, the copiers accept color negative or positive transparencies (photographed or hand-made), prints, or actual objects on the glass. The new machines print on a variety of surfaces, and in dimensions from standard stationery to billboard size.

Some of the new color copiers have peripheral units which allow the copier to accept input from a variety of sources, including computer files in several file formats, video signals, and CD-ROM imagery. This continuing integration of digital capabilities has created many new tools for the artist. Innovative electrophotographic technology and digital connectivity will break down prevailing boundaries and generate new art forms.

#### DIFFERENTIATION

The distinction between digital (discrete) and analog (continuous) representation is significant. Digitally encoded and computer processable images are clearly distinguished from that of their photographic predecessor. Critical factors include differing amounts of information, and differing characteristics of replication and manipulation in each format. Digital information is easy to manipulate, recombine, and transform.



William J. Mitchell discussed the quandary of an era when artists celebrate the potential of digital image manipulation, and the press calls for a code of ethics to regulate manipulation. Mitchell noted that we may "...see the emergence of digital imaging as a welcome opportunity to expose the aporias in photography's construction of the visual world, to deconstruct the very idea of photographic objectivity and closure, and to resist what has become an increasingly sclerotic pictorial tradition."5 He also observed that "After more than a century and a half of photographic production, we also have to contend with the powerful 'reality effect' that the photographic image has by now constructed for itself."6

Digital imaging has jolted this reference with its new conventions, understandings, transformations, and forms. Although we may be aware of the differences between objects and their photographic representations, the traditional assumptions about the 'reality' of photographic images is one problem, and the manipulations possible with digital images create an even greater quandary.

#### REPLICATION

Digital imaging diminishes the customary differentiation between unique originals and multiples, much as photography affected painting in the ninteenth century. The photocopier denies the provenance and authenticity of time and place traditional to the arts. The fidelity of the new copiers diminishes the conventional differentiation between original and copy. Replication is precise and indeciferable from the original. Appropriation is quick, effortless, and can be seen as a concern or an opportunity.

Margot Lovejoy writes that "In a sense copier technology represents the act of appropriation itself and stands out as a site for the Postmodern because it addresses directly questions having to do with the copy and the original, authorship

and originality." She further notes that "The use of the copy ... is one of the new strategies of postmodern artists who are appropriating images and styles of the past to critique the conventions of art history itself -- to deconstruct or unmask the modernist notion that the "original" and "originality" rightfully dominate in assigning value to art."

#### REPERCUSSION

Questions usually arise concerning the validity of art done via machine. Some ask if the mark of the human hand isn't necessary to art. Are mechanical tools the preserve of the unskilled? Do copiers encourage illicit appropriation? Can a mechanical system produce works of art that are unique, personal, of aesthetic value?

Repercussions to machine-aided art are not unique to the twentieth century. With the proliferation of photography by the mid-nineteenth century, painter Paul Delaroche is traditionally acknowledged as pronouncing 'From this day painting is dead'. Baudelaire is also said to have offered his observation that 'Industry, by invading the territories of art, has become art's most mortal enemy'.

Photography and industry were not fatal to painting and art, but the visual arts were immutably affected. embraced the new technologies and expanded their selection of tools and media. Just as photography proved to be a means of expression, creation, and communication; electrostatic media, computers, and electronic imaging now offer new modes of visualization. New technologies applied to art offer potential for new constructs, both visual and conceptual. Therefore, one rejoinder is to recognize the significance of the artist's concept above the tool, material or process. The originality of the visual statement does not depend on the rarity of the image, the laboriousness of handwork required, intricacy of process, or tradition of the tool.

#### TRANSFORMATION

The current generation of digital imaging is marked by transformation, mutation, proliferation and velocity. Traditional concepts of image originality and control are being challenged, and a syntax of copier imaging continues to develop. The images surveyed in this presentation offer a look at current contexts and aesthetic organizations, and perhaps a notion of future directions. Mitchell comments that "Digital imagers give meaning and value to computational readymades by appropriation, transformation, reprocessing, and recombination; we have entered the age of electrobricollage."9

The slide survey constitutes the 'eye' of this IVLA presentation, and exemplifies some of these new visual paradigms. These images, with statements by the artists, speak eloquently. Many of the artists in the slide survey have had considerable influence in the use of color copiers as a tool/medium in the visual arts.

#### THE SURVEY

The slides present a visual survey of selected contemporary artists in North America and Europe who utilize color copiers in their work. This sampling provides a rich repertory by over twenty diverse artists exhibiting new visual paradigms. Artists approach color copiers with diversity, spontaneity, a sense of discovery, exploitation of the technology, and elements of play. The opportunity for artist/machine interaction affords the potential for new combines of art and technology, and a fresh repertory of forms, methods, communications, and interpretations. Many artists attempt to demolish the confines which are intrinsic to the photocopier. Every tool offers particular limits as well as potentials to be considered. The immediacy of photocopier production is a factor which appeals to many artists.

Artists utilize color copiers with vast divergence. They differ greatly in what they bring to the copier. Some use

the machine as a large camera, bringing a variety of objects, images, and materials to the copyboard glass. One artist may use a color copier to create a visual diary or self portrait, another may use it as one would employ a small press. The artist may bring to the copier a prepared 'master' image, often a collage or synthesized work, and then utilize the copier to print the desired number in the edition. Lovejoy notes that "David Hockney calls the collection of office copiers in his studio magic new presses". 10 Some artists print a specific edition, signing and numbering the edition in the tradition of the printmaker. Others tap the 'press' as needed, often varying the prints and producing unique works rather than editions. A considerable number of artists use color copiers as a production tool for limited edition art books.

Other artists use color copier prints as intermediary images. One example is using the copier as a device to produce elements for the construction of a final collage or composition. The artists then fabricate one-of-a-kind works with color copy elements. An interesting paradox exists in this use of a machine engineered for duplication, employed to create unique, one-of-a-kind works of art. Diverse manipulations during printing, or of the print afterwards, also result in unique images.

Another example of the color copier as intermediary tool, is work transferred by heat or solvent transfers to other surfaces. This often produces a softening and/or transformation of the image which enhances the unique quality of these works.

This presenter's experience with color copiers began with the 3M Color-in-Color System I, later the Xerox 6500, and was reactivated by the Canon CLC 1. My work explores perceptual relationships, especially figure and ground interplays. With a photography background, I am challenged by both the meanings my images communicate, and the perceptual



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aspects of those images. Digital tools allow me to release my photoimages from their conventional frameworks and spatial cues, challenging these traditional concepts. Multiple layers of images are combined both physically (via collage) and electronically. Figure/ground interplays allow new interconnections and relationships. They play among visual and perceptual codes, assist the perceptual plays and ploys, and attempt to expand ways of both objective and subjective knowing.

#### **CONCLUSION**

The near wizardry of digital color copiers and related computer tecnologies is reminiscent of the magical quality attributed to photography in its early years. Debates will likely escalate as digital imaging becomes a global representation, just as photography did in its first 150 years. The ease-of-use and efficiency of digital copiers and technology contradicts traditional controls of artistic replication and distribution, and challenges conventional concepts of 'value' in art.

Image form, meaning, use, and value will essentially change. Digital imaging offers potential for new constructs, both visual and conceptual ... and will permanently transform the visual arts.

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- <sup>9</sup> Mitchell, op cit, p.7
- 10 Lovejoy, op cit, p. 115

